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DM nucleic - nucleic search, using sw model

run on: September 11, 2003, 15:02:03 ; Search time 4 Seconds  
(without alignments)  
2.435 Million cell updates/sec

Title: 10-009897-20

Perfect score: 20

Sequence: 1 ctgtaaatggcagctagc 20

Scoring table: IDENTITY\_NUC

Gapop 10.0 , Gapext 0.5

Searched: 112 seqs, 243491 residues

Total number of hits satisfying chosen parameters: 224

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 112 summaries

Database : 6492110.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Match	Query Length	ID	Description
1	20	100.0	2583	1	US-09-184-418C-44
2	20	100.0	2640	1	US-09-184-418C-41
3	20	100.0	2658	1	US-09-184-418C-42
4	20	100.0	8992	1	US-09-184-418C-4
5	18.4	92.0	2544	1	US-09-184-418C-89
6	18.4	92.0	2598	1	US-09-184-418C-98
7	18.4	92.0	2631	1	US-09-184-418C-87
8	18.4	92.0	2645	1	US-09-184-418C-86
9	18.4	92.0	2655	1	US-09-184-418C-95
10	18.4	92.0	2721	1	US-09-184-418C-96
11	18.4	92.0	8972	1	US-09-184-418C-9
12	18.4	92.0	9060	1	US-09-184-418C-10
13	17.4	87.0	2529	1	US-09-184-418C-62
14	17.4	87.0	2541	1	US-09-184-418C-18
15	17.4	87.0	2601	1	US-09-184-418C-60
16	17.4	87.0	2610	1	US-09-184-418C-15
17	17.4	87.0	2652	1	US-09-184-418C-61
18	17.4	87.0	2661	1	US-09-184-418C-16
19	17.4	87.0	8954	1	US-09-184-418C-6
20	17.4	87.0	8968	1	US-09-184-418C-1
21	16.8	84.0	2607	1	US-09-184-418C-80
22	16.8	84.0	2666	1	US-09-184-418C-77
23	16.8	84.0	2684	1	US-09-184-418C-78
24	16.8	84.0	9010	1	US-09-184-418C-8
25	15.2	76.0	2538	1	US-09-184-418C-36
26	15.2	76.0	2538	1	US-09-184-418C-36
27	15.2	76.0	2550	1	US-09-184-418C-28
28	15.2	76.0	2571	1	US-09-184-418C-71
29	15.2	76.0	2579	1	US-09-184-418C-51
30	15.2	76.0	2597	1	US-09-184-418C-25
31	15.2	76.0	2606	1	US-09-184-418C-33
32	15.2	76.0	2643	1	US-09-184-418C-68
33	15.2	76.0	2645	1	US-09-184-418C-52

34	15.2	76.0	2657	1	US-09-184-418C-34	Sequence 34, Appl
35	15.2	76.0	2663	1	US-09-184-418C-26	Sequence 26, Appl
36	15.2	76.0	2688	1	US-09-184-418C-69	Sequence 69, Appl
37	15.2	76.0	8953	1	US-09-184-418C-3	Sequence 3, Appl
38	15.2	76.0	8986	1	US-09-184-418C-5	Sequence 5, Appl
39	15.2	76.0	8987	1	US-09-184-418C-2	Sequence 2, Appl
40	15.2	76.0	9050	1	US-09-184-418C-7	Sequence 7, Appl
41	13.8	69.0	2571	1	US-09-184-418C-71	Sequence 71, Appl
42	13.8	69.0	2643	1	US-09-184-418C-68	Sequence 68, Appl
43	13.8	69.0	2688	1	US-09-184-418C-69	Sequence 69, Appl
44	13.8	69.0	9050	1	US-09-184-418C-7	Sequence 7, Appl
45	13.6	68.0	2574	1	US-09-184-418C-107	Sequence 107, Appl
46	13.6	68.0	2633	1	US-09-184-418C-104	Sequence 104, Appl
47	13.6	68.0	2651	1	US-09-184-418C-105	Sequence 105, Appl
48	13.6	68.0	8959	1	US-09-184-418C-11	Sequence 11, Appl
49	10.6	53.0	621	1	US-09-184-418C-81	Sequence 81, Appl
50	10.6	53.0	624	1	US-09-184-418C-32	Sequence 32, Appl
51	10.6	53.0	624	1	US-09-184-418C-90	Sequence 90, Appl
52	10.6	53.0	8987	1	US-09-184-418C-2	Sequence 2, Appl
53	10.4	52.0	624	1	US-09-184-418C-108	Sequence 108, Appl
54	10.4	52.0	3000	1	US-09-184-418C-74	Sequence 74, Appl
55	10.4	52.0	3011	1	US-09-184-418C-101	Sequence 101, Appl
56	10.4	52.0	3012	1	US-09-184-418C-92	Sequence 92, Appl
57	10.4	52.0	3017	1	US-09-184-418C-83	Sequence 83, Appl
58	9.8	49.0	579	1	US-09-184-418C-30	Sequence 30, Appl
59	9.8	49.0	3012	1	US-09-184-418C-57	Sequence 57, Appl
60	9.8	49.0	4307	1	US-09-184-418C-48	Sequence 48, Appl
61	9.8	49.0	8953	1	US-09-184-418C-3	Sequence 3, Appl
62	9.6	48.0	2538	1	US-09-184-418C-36	Sequence 36, Appl
63	9.6	48.0	2538	1	US-09-184-418C-54	Sequence 54, Appl
64	9.6	48.0	2550	1	US-09-184-418C-28	Sequence 28, Appl
65	9.6	48.0	2579	1	US-09-184-418C-51	Sequence 51, Appl
66	9.6	48.0	2597	1	US-09-184-418C-25	Sequence 25, Appl
67	9.6	48.0	2606	1	US-09-184-418C-33	Sequence 33, Appl
68	9.6	48.0	2645	1	US-09-184-418C-52	Sequence 52, Appl
69	9.6	48.0	2657	1	US-09-184-418C-34	Sequence 34, Appl
70	9.6	48.0	2663	1	US-09-184-418C-26	Sequence 26, Appl
71	9.6	48.0	3011	1	US-09-184-418C-101	Sequence 101, Appl
72	9.6	48.0	3012	1	US-09-184-418C-57	Sequence 57, Appl
73	9.6	48.0	3012	1	US-09-184-418C-92	Sequence 92, Appl
74	9.6	48.0	3017	1	US-09-184-418C-83	Sequence 83, Appl
75	9.6	48.0	4307	1	US-09-184-418C-48	Sequence 48, Appl
76	9.6	48.0	8954	1	US-09-184-418C-6	Sequence 6, Appl
77	9.6	48.0	8959	1	US-09-184-418C-11	Sequence 11, Appl
78	9.6	48.0	8966	1	US-09-184-418C-5	Sequence 5, Appl
79	9.6	48.0	8968	1	US-09-184-418C-1	Sequence 1, Appl
80	9.6	48.0	8972	1	US-09-184-418C-9	Sequence 9, Appl
81	9.6	48.0	8992	1	US-09-184-418C-4	Sequence 4, Appl
82	9.6	48.0	9060	1	US-09-184-418C-10	Sequence 10, Appl
83	9.4	47.0	624	1	US-09-184-418C-108	Sequence 108, Appl
84	9.2	46.0	579	1	US-09-184-418C-66	Sequence 66, Appl
85	9.2	46.0	2583	1	US-09-184-418C-44	Sequence 44, Appl
86	9.2	46.0	2640	1	US-09-184-418C-41	Sequence 41, Appl
87	9.2	46.0	2658	1	US-09-184-418C-42	Sequence 42, Appl
88	9	45.0	207	1	US-09-184-418C-21	Sequence 21, Appl
89	9	45.0	291	1	US-09-184-418C-40	Sequence 40, Appl
90	9	45.0	621	1	US-09-184-418C-63	Sequence 63, Appl
91	9	45.0	624	1	US-09-184-418C-32	Sequence 32, Appl
92	9	45.0	624	1	US-09-184-418C-45	Sequence 45, Appl
93	9	45.0	1476	1	US-09-184-418C-100	Sequence 100, Appl
94	9	45.0	1479	1	US-09-184-418C-12	Sequence 12, Appl
95	9	45.0	1496	1	US-09-184-418C-82	Sequence 82, Appl
96	9	45.0	1503	1	US-09-184-418C-29	Sequence 29, Appl
97	9	45.0	2544	1	US-09-184-418C-89	Sequence 89, Appl
98	9	45.0	2598	1	US-09-184-418C-98	Sequence 98, Appl
99	9	45.0	2631	1	US-09-184-418C-87	Sequence 87, Appl
100	9	45.0	2646	1	US-09-184-418C-86	Sequence 86, Appl
101	9	45.0	2655	1	US-09-184-418C-95	Sequence 95, Appl
102	9	45.0	2721	1	US-09-184-418C-96	Sequence 96, Appl
103	8.8	44.0	579	1	US-09-184-418C-23	Sequence 23, Appl
104	8.8	44.0	579	1	US-09-184-418C-39	Sequence 39, Appl
105	8.8	44.0	579	1	US-09-184-418C-49	Sequence 49, Appl
106	8.8	44.0	579	1	US-09-184-418C-75	Sequence 75, Appl

c 107 8.8 44.0 579 1 US-09-184-418C-75 Sequence 75, Appl  
 c 108 8.8 44.0 579 1 US-09-184-418C-84 Sequence 84, Appl  
 c 109 8.8 44.0 579 1 US-09-184-418C-84 Sequence 84, Appl  
 c 110 8.8 44.0 579 1 US-09-184-418C-93 Sequence 93, Appl  
 c 111 8.8 44.0 579 1 US-09-184-418C-102 Sequence 102, App  
 c 112 8.8 44.0 579 1 US-09-184-418C-102 Sequence 102, App

## ALIGNMENTS

RESULT 1  
 JS-09-184-418C-44  
 ; Sequence 44, Application US/09184418C  
 ; Patent No. 6492110  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hahn, Beatrice  
 ; APPLICANT: Gao, Feng  
 ; APPLICANT: Shaw, George  
 ; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
 ; FILE REFERENCE: D6287  
 ; CURRENT APPLICATION NUMBER: US/09/184,418C  
 ; CURRENT FILING DATE: 1999-11-02  
 ; NUMBER OF SEQ ID NOS: 112  
 ; SEQ ID NO 44  
 ; LENGTH: 2583  
 ; TYPE: DNA  
 ; ORGANISM: Human immunodeficiency virus type 1  
 ; FEATURE:  
 ; OTHER INFORMATION: isolate-92RW009; gene-env  
 JS-09-184-418C-44

Query Match 100.0%; Score 20; DB 1; Length 2583;  
 Best Local Similarity 100.0%; Pred. No. 0.34;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20  
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 Db 781 CTGTTAAATGGCAGTCTAGC 800

RESULT 2  
 US-09-184-418C-41  
 ; Sequence 41, Application US/09184418C  
 ; Patent No. 6492110  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hahn, Beatrice  
 ; APPLICANT: Gao, Feng  
 ; APPLICANT: Shaw, George  
 ; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
 ; FILE REFERENCE: D6287  
 ; CURRENT APPLICATION NUMBER: US/09/184,418C  
 ; CURRENT FILING DATE: 1999-11-02  
 ; NUMBER OF SEQ ID NOS: 112  
 ; SEQ ID NO 41  
 ; LENGTH: 2640  
 ; TYPE: DNA  
 ; ORGANISM: Human immunodeficiency virus type 1  
 ; FEATURE:  
 ; OTHER INFORMATION: isolate-92RW009; gene-tat  
 US-09-184-418C-41

Query Match 100.0%; Score 20; DB 1; Length 2640;  
 Best Local Similarity 100.0%; Pred. No. 0.34;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20  
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 Db 1185 CTGTTAAATGGCAGTCTAGC 1204

RESULT 3  
 US-09-184-418C-42  
 ; Sequence 42, Application US/09184418C  
 ; Patent No. 6492110  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hahn, Beatrice  
 ; APPLICANT: Gao, Feng  
 ; APPLICANT: Shaw, George  
 ; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
 ; FILE REFERENCE: D6287  
 ; CURRENT APPLICATION NUMBER: US/09/184,418C  
 ; CURRENT FILING DATE: 1999-11-02  
 ; NUMBER OF SEQ ID NOS: 112  
 ; SEQ ID NO 42  
 ; LENGTH: 2658  
 ; TYPE: DNA  
 ; ORGANISM: Human immunodeficiency virus type 1  
 ; FEATURE:  
 ; OTHER INFORMATION: isolate-92RW009; gene=rev  
 US-09-184-418C-42

Query Match 100.0%; Score 20; DB 1; Length 2658;  
 Best Local Similarity 100.0%; Pred. No. 0.34;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20  
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 Db 1046 CTGTTAAATGGCAGTCTAGC 1065

RESULT 4  
 US-09-184-418C-4  
 ; Sequence 4, Application US/09184418C  
 ; Patent No. 6492110  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hahn, Beatrice  
 ; APPLICANT: Gao, Feng  
 ; APPLICANT: Shaw, George  
 ; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
 ; FILE REFERENCE: D6287  
 ; CURRENT APPLICATION NUMBER: US/09/184,418C  
 ; CURRENT FILING DATE: 1999-11-02  
 ; NUMBER OF SEQ ID NOS: 112  
 ; SEQ ID NO 4  
 ; LENGTH: 8992  
 ; TYPE: DNA  
 ; ORGANISM: Human immunodeficiency virus type 1  
 ; FEATURE:  
 ; OTHER INFORMATION: isolate-92RW009; 139.1624:gag; 1690.4428:pol(N-terminus uncert  
 ; OTHER INFORMATION: 4373.4951:vif; 4831.5181:vpr; 5162.7801:tat; 5301.7958:rev;  
 ; OTHER INFORMATION: 5403.5648:vpu; 5566.8148:env; 8150.8773:nef  
 US-09-184-418C-4

Query Match 100.0%; Score 20; DB 1; Length 8992;  
 Best Local Similarity 100.0%; Pred. No. 0.31;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20  
 |||||  
 Db 6346 CTGTTAAATGGCAGTCTAGC 6365

RESULT 5  
 US-09-184-418C-89  
 ; Sequence 89, Application US/09184418C  
 ; Patent No. 6492110  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hahn, Beatrice  
 ; APPLICANT: Gao, Feng  
 ; APPLICANT: Shaw, George  
 ; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN

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; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 89
; LENGTH: 2544
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene-env
US-09-184-418C-89

Query Match      92.0%; Score 18.4; DB 1; Length 2544;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

2Y 1 CTGTTAAATGGCAGTCTAGC 20
Db 781 CTGTTAAATGGTACTGTAGC 800

RESULT 6
JS-09-184-418C-98
; Sequence 98, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 98
; LENGTH: 2598
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene-env
JS-09-184-418C-98

Query Match      92.0%; Score 18.4; DB 1; Length 2598;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

2Y 1 CTGTTAAATGGCAGTCTAGC 20
Db 793 CTGTTGAATGGCAGTCTAGC 812

RESULT 7
JS-09-184-418C-87
; Sequence 87, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 87
; LENGTH: 2631
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; gene-rev

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US-09-184-418C-87

Query Match      92.0%; Score 18.4; DB 1; Length 2631;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
Db 1058 CTGTTAAATGGTACTGTAGC 1077

RESULT 8
US-09-184-418C-86
; Sequence 86, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 86
; LENGTH: 2646
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene-tat
US-09-184-418C-86

Query Match      92.0%; Score 18.4; DB 1; Length 2646;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
Db 1197 CTGTTAAATGGTACTGTAGC 1216

RESULT 9
US-09-184-418C-95
; Sequence 95, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 95
; LENGTH: 2655
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene-tat
US-09-184-418C-95

Query Match      92.0%; Score 18.4; DB 1; Length 2655;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
Db 1197 CTGTTGAATGGCAGTCTAGC 1216

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RESULT 10
US-09-184-418C-96
; Sequence 96, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 96
; LENGTH: 2721
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene=rev
US-09-184-418C-96

Query Match          92.0%; Score 18.4; DB 1; Length 2721;
Best Local Similarity 95.0%; Pred. No. 0.8;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1  CTGTTAAATGGCAGTCTAGC 20
DB      1058  CTGTTGAATGGCAGTCTAGC 1077

RESULT 11
US-09-184-418C-9
; Sequence 9, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; 137.1632:gag; 1419.4435:pol;
; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5169.7814:tat;
; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpv; 5585.8128:env;
; OTHER INFORMATION: 8130.8753:nef
US-09-184-418C-9

Query Match          92.0%; Score 18.4; DB 1; Length 8972;
Best Local Similarity 95.0%; Pred. No. 0.8;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1  CTGTTAAATGGCAGTCTAGC 20
DB      6365  CTGTTAAATGGTACTAGC 6384

RESULT 12
US-09-184-418C-10
; Sequence 10, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 10
; LENGTH: 9060
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; 159.1649:"gag";
; OTHER INFORMATION: 1442.4453:"pol"; 4398.4976:"vif"; 4916.5206:"vpr";
; OTHER INFORMATION: 5187.7841:"tat"; 5326.8046:"rev";
; OTHER INFORMATION: 5428.5673:"vpv"; 5591.8188:"env"; 8190.8843:"nef"
US-09-184-418C-10

Query Match          92.0%; Score 18.4; DB 1; Length 9060;
Best Local Similarity 95.0%; Pred. No. 0.8;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1  CTGTTAAATGGCAGTCTAGC 20
DB      6383  CTGTTGAATGGCAGTCTAGC 6402

RESULT 13
US-09-184-418C-62
; Sequence 62, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 62
; LENGTH: 2529
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; gene=env
US-09-184-418C-62

Query Match          87.0%; Score 17.4; DB 1; Length 2529;
Best Local Similarity 94.7%; Pred. No. 1.6;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2  TGTAAATGGCAGTCTAGC 20
DB      785  TGTAAATGGCAGCTAGC 803

RESULT 14
US-09-184-418C-18
; Sequence 18, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 18
; LENGTH: 2541

```



```
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: IMMUNODEFICIENCY VIRUS TYPE 1
; CURRENT APPLICATION NUMBER: D6287
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 6
; LENGTH: 8954
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; 142..1579:gene="gag"; 1437..4448:gene="pol";
; OTHER INFORMATION: 4393..4971:gene="vif"; 4911..5201:gene="vpr";
; OTHER INFORMATION: 5182..7782:gene="tat"; 5321..7972:gene="rev";
; OTHER INFORMATION: 5586..8114:gene="env"; 8116..8736:gene="nef"
US-09-184-418C-6

Query Match      87.0%; Score 17.4; DB 1; Length 8954;
Best Local Similarity 94.7%; Pred. No. 1.5;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
      ||||| ||||| |||||
Db      6370 TGTAAATGGCAGCTAGC 6388

RESULT 20
US-09-184-418C-1
; Sequence 1, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 1
; LENGTH: 8968
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR020; 133..1611:gag; 4369,4947:vif;
; OTHER INFORMATION: 4887,5177:vpr; 5158,7767:tat; 5297,7957:rev;
; OTHER INFORMATION: 5396,5641:vpr; 5559,8099:env; 8101,8727:nef
US-09-184-418C-1

Query Match      87.0%; Score 17.4; DB 1; Length 8968;
Best Local Similarity 94.7%; Pred. No. 1.5;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
      ||||| ||||| |||||
Db      6343 TGTAAATGGCAGCTAGC 6361

RESULT 21
US-09-184-418C-80
; Sequence 80, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02

; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 8
; LENGTH: 2607
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M51.8; gene=env
US-09-184-418C-80

Query Match      84.0%; Score 16.8; DB 1; Length 2607;
Best Local Similarity 90.0%; Pred. No. 2.3;
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGCTAGC 20
      ||||| ||||| |||||
Db      814 CTGTTAAATGGTAGCCTAGC 833

RESULT 22
US-09-184-418C-77
; Sequence 77, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 77
; LENGTH: 2666
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M51.8; gene=tat
US-09-184-418C-77

Query Match      84.0%; Score 16.8; DB 1; Length 2666;
Best Local Similarity 90.0%; Pred. No. 2.3;
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGCTAGC 20
      ||||| ||||| |||||
Db      1220 CTGTTAAATGGTAGCCTAGC 1239

RESULT 23
US-09-184-418C-78
; Sequence 78, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 78
; LENGTH: 2684
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M51.8; gene=rev
US-09-184-418C-78

Query Match      84.0%; Score 16.8; DB 1; Length 2684;
Best Local Similarity 90.0%; Pred. No. 2.3;
```

```
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 1081 CTGTTAAATGGTAGCCTAGC 1100

RESULT 24
US-09-184-418C-8
; Sequence 8, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 8
; LENGTH: 9010
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M651; 137..1621:"gag"; 1426..4425:"pol";
; OTHER INFORMATION: 4370..4948:"vif"; 4888..5178:"vpr";
; OTHER INFORMATION: 5159..5373-7734..7824:"tat"; 5298..5373-7734..7981:"rev";
; OTHER INFORMATION: 5387..5647:"vpu"; 5565..8171:"env"; 8173..8793:"nef"
US-09-184-418C-8

Query Match 84.0%; Score 16.8; DB 1; Length 9010;
Best Local Similarity 90.0%; Pred. No. 2.1;
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 6378 CTGTTAAATGGTAGCCTAGC 6397

RESULT 25
US-09-184-418C-36
; Sequence 36, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 36
; LENGTH: 2538
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene-env
US-09-184-418C-36

Query Match 76.0%; Score 15.2; DB 1; Length 2538;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 757 CTATTAATGAAGCCCTAGC 776

RESULT 26
```

```
US-09-184-418C-54
; Sequence 54, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 54
; LENGTH: 2538
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene-env
US-09-184-418C-54

Query Match 76.0%; Score 15.2; DB 1; Length 2538;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 805 CTACTAAATGGTAGCTAGC 824

RESULT 27
US-09-184-418C-28
; Sequence 28, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 28
; LENGTH: 2550
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene-env
US-09-184-418C-28

Query Match 76.0%; Score 15.2; DB 1; Length 2550;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 772 CTGCTGAATGGCAGTTAGC 791

RESULT 28
US-09-184-418C-71
; Sequence 71, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
```

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; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 71
; LENGTH: 2571
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY032.3; gene=env
US-09-184-418C-71

Query Match
Best Local Similarity 76.0%; Score 15.2; DB 1; Length 2571;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    ||| ||| ||| ||| |||
Db 793 CTGTTAAATGGAGCTTAGC 812

RESULT 29
US-09-184-418C-51
; Sequence 51, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 51
; LENGTH: 2579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=tat
US-09-184-418C-51

Query Match
Best Local Similarity 76.0%; Score 15.2; DB 1; Length 2579;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    ||| ||| ||| ||| |||
Db 1193 CTACTAAATGCTAGCTAGC 1212

RESULT 30
US-09-184-418C-25
; Sequence 25, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 25
; LENGTH: 2597
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=tat
US-09-184-418C-25

Query Match
Best Local Similarity 76.0%; Score 15.2; DB 1; Length 2597;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    ||| ||| ||| ||| |||
Db 1191 CTGTTAAATGGAGCTTAGC 1210

RESULT 31
US-09-184-418C-33
; Sequence 33, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 33
; LENGTH: 2606
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene=tat; CDS: join (5177..5391,
US-09-184-418C-33

Query Match
Best Local Similarity 76.0%; Score 15.2; DB 1; Length 2606;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    ||| ||| ||| ||| |||
Db 1157 CTATTAAATGGAGCTTAGC 1176

RESULT 32
US-09-184-418C-68
; Sequence 68, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 68
; LENGTH: 2643
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=tat
US-09-184-418C-68

Query Match
Best Local Similarity 76.0%; Score 15.2; DB 1; Length 2643;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    ||| ||| ||| ||| |||
Db 1191 CTGTTAAATGGAGCTTAGC 1210

RESULT 33
US-09-184-418C-52
```



```
; Sequence 52, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 52
; LENGTH: 2645
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=rev
US-09-184-418C-52

Query Match          76.0%; Score 15.2; DB 1; Length 2645;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
        ||| ||||| ||||| |||
Db      1054 CTACTAAATGGTAGTCTAGC 1073

RESULT 34
US-09-184-418C-34
; Sequence 34, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 34
; LENGTH: 2657
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene=rev; CDS: join(5316..5391,
US-09-184-418C-34

Query Match          76.0%; Score 15.2; DB 1; Length 2657;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
        ||| ||||| ||||| |||
Db      1018 CTATTAAATGGAGGCTTAGC 1037

RESULT 35
US-09-184-418C-26
; Sequence 26, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C

; Sequence 52, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 52
; LENGTH: 2663
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=rev
US-09-184-418C-26

Query Match          76.0%; Score 15.2; DB 1; Length 2663;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
        ||| ||||| ||||| |||
Db      1027 CTGCTGAATGGCAGTTTAGC 1046

RESULT 36
US-09-184-418C-69
; Sequence 69, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 69
; LENGTH: 2688
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=rev
US-09-184-418C-69

Query Match          76.0%; Score 15.2; DB 1; Length 2688;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
        ||| ||||| ||||| |||
Db      1052 CTGTTAAATGGAGGCTTAGC 1071

RESULT 37
US-09-184-418C-3
; Sequence 3, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 3
; LENGTH: 8953
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="90CR056"; 137..1639:gene="gag"; 4388..4966:gene="vif";
; OTHER INFORMATION: 4906..5196:gene="vpr"; 5177..7782:gene="tat";
; OTHER INFORMATION: 5316..7972:gene="rev"; 5408..5650:gene="vpu";
; OTHER INFORMATION: 5377..8114:gene="env"; 8117..8737:gene="nef";
```

## US-09-184-418C-3

Query Match 76.0%; Score 15.2; DB 1; Length 8953;  
Best Local Similarity 85.0%; Pred. No. 5.3;  
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGCTAGC 20  
||| ||||| ||| |||||  
DB 6333 CTATTAAATGGAGCCCTAGC 6352

## RESULT 38

US-09-184-418C-5  
; Sequence 5, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 5  
; LENGTH: 8966  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate="92NG003"; 157..1650:gene:"gag"; 4408..4986:gene:"vif";  
; OTHER INFORMATION: 4926..5039:gene:"vpr"; 5184..752:tat;  
; OTHER INFORMATION: 5323..7967:gene:"rev"; 5425..5654:gene:"vpu";  
; OTHER INFORMATION: 5572..8109:gene:"env"; 8111..8731:gene:"nef";  
US-09-184-418C-5

Query Match 76.0%; Score 15.2; DB 1; Length 8966;  
Best Local Similarity 85.0%; Pred. No. 5.3;  
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGCTAGC 20  
||| ||||| ||||| |||||  
DB 6376 CTACTAAATGTAGTCTAGC 6395

## RESULT 39

US-09-184-418C-2  
; Sequence 2, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 2  
; LENGTH: 8987  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate="92NG083"; 156.362:gag; 1727.4465:pol;  
; OTHER INFORMATION: 4410.4988:vif; 4928.5218:vpr; 5199.7795:tat;  
; OTHER INFORMATION: 5338.8000:rev; 5440.5466:vpu; 5593.8142:env;  
; OTHER INFORMATION: 8144.8767:nef  
US-09-184-418C-2

Query Match 76.0%; Score 15.2; DB 1; Length 8987;  
Best Local Similarity 85.0%; Pred. No. 5.3;  
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGCTAGC 20  
||| ||||| ||||| |||||  
DB 6364 CTGCTGAATGGCAGTTTAGC 6383

## RESULT 40

US-09-184-418C-7  
; Sequence 7, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 7  
; LENGTH: 9050  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate="94CY032.3"; 156..1658:"gag"; 1454..4462:"pol";  
; OTHER INFORMATION: 4407..4985:"vif"; 4925..5212:"vpr"; 5200..7842:"tat";  
; OTHER INFORMATION: 5339..8026:"rev"; 5435..5680:"vpu"; 5598..8168:"env";  
US-09-184-418C-7

Query Match 76.0%; Score 15.2; DB 1; Length 9050;  
Best Local Similarity 85.0%; Pred. No. 5.3;  
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGCTAGC 20  
||| ||||| ||| |||||  
DB 6390 CTGTTAAATGGAAGCTTAGC 6409

## RESULT 41

US-09-184-418C-71/c  
; Sequence 71, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 71  
; LENGTH: 2571  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate="94CY032.3; gene-env  
US-09-184-418C-71

Query Match 69.0%; Score 13.8; DB 1; Length 2571;  
Best Local Similarity 88.2%; Pred. No. 14;  
Matches 15; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 4 TTAATGGCAGCTAGC 20  
||| ||||| ||||| |||||  
DB 554 TTAATGGCAGCTAGC 538

## RESULT 42

US-09-184-418C-68/c

```
; Sequence 68, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 68
; LENGTH: 2643
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=tat
US-09-184-418C-68

Query Match          69.0%; Score 13.8; DB 1; Length 2643;
Best Local Similarity 88.2%; Pred. No. 14;
Matches 15; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      4 TTAATGGCAGCTCTAGC 20
Db      952 TTAATGGCAGCTCTAGC 936

RESULT 43
US-09-184-418C-69/c
; Sequence 69, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 69
; LENGTH: 2688
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=rev
US-09-184-418C-69

Query Match          69.0%; Score 13.8; DB 1; Length 2688;
Best Local Similarity 88.2%; Pred. No. 14;
Matches 15; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      4 TTAATGGCAGCTCTAGC 20
Db      813 TTAATGGCAGCTCTAGC 797

RESULT 44
US-09-184-418C-7/c
; Sequence 7, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
```

```
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 7
; LENGTH: 9050
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY032.3; 156..1658:"gag"; 1454..4462:"pol";
; OTHER INFORMATION: 4407..4985:"vif"; 4925..5212:"vpr"; 5200..7842:"tat";
; OTHER INFORMATION: 5339..8026:"rev"; 5435..5680:"vpu"; 5598..8168:"env";
; OTHER INFORMATION: 8170..8829:"nef"
US-09-184-418C-7

Query Match          69.0%; Score 13.8; DB 1; Length 9050;
Best Local Similarity 88.2%; Pred. No. 11;
Matches 15; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      4 TTAATGGCAGCTCTAGC 20
Db      6151 TTAATGGCAGCTCTAGC 6135

RESULT 45
US-09-184-418C-107
; Sequence 107, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 107
; LENGTH: 2574
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=env
US-09-184-418C-107

Query Match          68.0%; Score 13.6; DB 1; Length 2574;
Best Local Similarity 80.0%; Pred. No. 16;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGCTCTAGC 20
Db      769 CTGTTAAATGGCAGCTCTAGC 788

RESULT 46
US-09-184-418C-104
; Sequence 104, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 104
; LENGTH: 2633
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=tat
US-09-184-418C-104
```

```
Query Match      68.0%; Score 13.6; DB 1; Length 2633;
Best Local Similarity 80.0%; Pred. No. 16;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    ||||| ||||| ||
DB 1175 CTGTTAAATGGTAGCACAGC 1194

RESULT 47
US-09-184-418C-105
; Sequence 105, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 105
; LENGTH: 2651
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=rev
US-09-184-418C-105

Query Match      68.0%; Score 13.6; DB 1; Length 2651;
Best Local Similarity 80.0%; Pred. No. 16;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    ||||| ||||| ||
DB 1036 CTGTTAAATGGTAGCACAGC 1055

RESULT 48
US-09-184-418C-11
; Sequence 11, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 11
; LENGTH: 8959
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; 138.1613:"gag";
; OTHER INFORMATION: 1418.4428:"pol"; 4361.4939:"vif"; 4879.5169:"vpr";
; OTHER INFORMATION: 5150.7782:"tat"; 5289.7939:"rev"; 5378.5638:"vpu";
; OTHER INFORMATION: 5556.8129:"env"; 8131.8754:"nef"
US-09-184-418C-11

Query Match      68.0%; Score 13.6; DB 1; Length 8959;
Best Local Similarity 80.0%; Pred. No. 13;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    ||||| ||||| ||
DB 6324 CTGTTAAATGGTAGCACAGC 6343
```

```
RESULT 49
US-09-184-418C-81
; Sequence 81, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 81
; LENGTH: 621
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: nef
US-09-184-418C-81

Query Match      53.0%; Score 10.6; DB 1; Length 621;
Best Local Similarity 76.5%; Pred. No. 1.1e+02;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 3 GTTAATGGCAGTCTAG 19
    || ||| ||||| |||
DB 15 GTCAAAAAGCAGTATAG 31

RESULT 50
US-09-184-418C-32/c
; Sequence 32, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 32
; LENGTH: 624
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=nef
US-09-184-418C-32

Query Match      53.0%; Score 10.6; DB 1; Length 624;
Best Local Similarity 76.5%; Pred. No. 1.1e+02;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 3 GTTAATGGCAGTCTAG 19
    || ||| ||||| |||
DB 417 GGTCAATGGGAGTCTAG 401

RESULT 51
US-09-184-418C-90
; Sequence 90, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
```

```
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 90
; LENGTH: 624
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96A751.3; gene=nef
US-09-184-418C-90
```

```
Query Match 53.0%; Score 10.6; DB 1; Length 624;
Best Local Similarity 76.5%; Pred. No. 1.1e+02;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 3 GTTAAATGGCAGCTCTAG 19
    ||||| ||||| |||
Db 15 GTCAAAACGAGTATAG 31
```

```
RESULT 52
US-09-184-418C-2/c
; Sequence 2, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 2
; LENGTH: 8987
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; 156.362:gag; 1727.4465:pol;
; OTHER INFORMATION: 4410.4988:vif; 4928.5218:vpr; 5199.7795:tat;
; OTHER INFORMATION: 5338.8000:rev; 5440.5466:vpr; 5593.8142:env;
; OTHER INFORMATION: 8144.8767:nef
US-09-184-418C-2
```

```
Query Match 53.0%; Score 10.6; DB 1; Length 8987;
Best Local Similarity 76.5%; Pred. No. 44;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 3 GTTAAATGGCAGCTCTAG 19
    ||||| ||||| |||
Db 8560 GGTCAAGTGGAGTCTAG 8544
```

```
RESULT 53
US-09-184-418C-108
; Sequence 108, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 108
; LENGTH: 624
; TYPE: DNA
```

```
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=nef
US-09-184-418C-108
```

```
Query Match 52.0%; Score 10.4; DB 1; Length 624;
Best Local Similarity 70.0%; Pred. No. 1.2e+02;
Matches 14; Conservative 0; Mismatches 6; Indels 0; Gaps 0;
```

```
QY 1 CTTTAAATGGCAGTCTAGC 20
    ||||| ||||| |||||
Db 553 CAGTTTGACAGCGCTAGC 572
```

```
RESULT 54
US-09-184-418C-74
; Sequence 74, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 74
; LENGTH: 3000
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M651.8; gene=pol
US-09-184-418C-74
```

```
Query Match 52.0%; Score 10.4; DB 1; Length 3000;
Best Local Similarity 91.7%; Pred. No. 81;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
QY 6 AAATGGCAGTCT 17
    ||||| ||||| |||
Db 2663 AAATGGCAGTAT 2674
```

```
RESULT 55
US-09-184-418C-101
; Sequence 101, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 101
; LENGTH: 3011
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=pol
US-09-184-418C-101
```

```
Query Match 52.0%; Score 10.4; DB 1; Length 3011;
Best Local Similarity 91.7%; Pred. No. 80;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
QY 6 AAATGGCAGTCT 17
    ||||| ||||| |||
```

```
Db      2662 AAATGGCAGTAT 2673

RESULT 56
US-09-184-418C-92
; Sequence 92, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 92
; LENGTH: 3012
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene-pol
US-09-184-418C-92

Query Match      52.0%; Score 10.4; DB 1; Length 3012;
Best Local Similarity 91.7%; Pred. No. 80;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
      |||||
Db      2675 AAATGGCAGTAT 2686

RESULT 57
US-09-184-418C-83
; Sequence 83, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 83
; LENGTH: 3017
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene-pol
US-09-184-418C-83

Query Match      52.0%; Score 10.4; DB 1; Length 3017;
Best Local Similarity 91.7%; Pred. No. 80;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
      |||||
Db      2680 AAATGGCAGTAT 2691

RESULT 58
US-09-184-418C-30/C
; Sequence 30, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 30
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene-vif
US-09-184-418C-30

Query Match      49.0%; Score 9.8; DB 1; Length 579;
Best Local Similarity 84.6%; Pred. No. 1.7e+02;
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      5 TAAATGGCAGTCT 17
      |||||
Db      243 TAAATGCCATTCT 231

RESULT 59
US-09-184-418C-57
; Sequence 57, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 57
; LENGTH: 3012
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; gene-pol; note=NH2-terminus
US-09-184-418C-57

Query Match      49.0%; Score 9.8; DB 1; Length 3012;
Best Local Similarity 84.6%; Pred. No. 1e+02;
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAG 14
      |||||
Db      2265 TGATAATGTCAG 2277

RESULT 60
US-09-184-418C-48
; Sequence 48, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 48
; LENGTH: 4307
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
```

; FEATURE:  
; OTHER INFORMATION: isolate=92NG003; gene=gag-pol fusion  
US-09-184-418C-48

Query Match 49.0%; Score 9.8; DB 1; Length 4307;  
Best Local Similarity 84.6%; Pred. No. 84;  
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 2 TGTAAATGGCAG 14  
||| ||||| |||  
Db 3560 TGATAATGTCAG 3572

RESULT 61  
US-09-184-418C-3/c  
; Sequence 3, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 3  
; LENGTH: 8953  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate="90CR056"; 137..1639:gene="gag"; 4388..4966:gene="vif";  
; OTHER INFORMATION: 4906..5196:gene "vpr"; 5177..7782:gene="tat";  
; OTHER INFORMATION: 5316..7972:gene="rev"; 5408..5650:gene="vpu";  
; OTHER INFORMATION: 5577..8114:gene="env"; 8117..8737:gene="nef";

JS-09-184-418C-3

Query Match 49.0%; Score 9.8; DB 1; Length 8953;  
Best Local Similarity 84.6%; Pred. No. 51;  
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCT 17  
||||| ||||| |||  
Db 4630 TAAATGGCAGTCT 4618

RESULT 62  
JS-09-184-418C-36/c  
; Sequence 36, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 36  
; LENGTH: 2538  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate=90CR056; gene=env

JS-09-184-418C-36

Query Match 48.0%; Score 9.6; DB 1; Length 2538;  
Best Local Similarity 75.0%; Pred. No. 1.2e+02;  
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 4 TTAATGGCAGTCTAG 19  
||| ||||| |||  
Db 764 TTAATAGCAGTTGAG 749

RESULT 63  
US-09-184-418C-54/c  
; Sequence 54, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 54  
; LENGTH: 2538  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate=92NG003; gene=env

US-09-184-418C-54

Query Match 48.0%; Score 9.6; DB 1; Length 2538;  
Best Local Similarity 75.0%; Pred. No. 1.2e+02;  
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 2 TGTAAATGGCAGTCT 17  
||| ||||| |||  
Db 1204 TCTTACATGGGAGTGT 1189

RESULT 64  
US-09-184-418C-28/c  
; Sequence 28, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 28  
; LENGTH: 2550  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate=92NG083; gene=env

US-09-184-418C-28

Query Match 48.0%; Score 9.6; DB 1; Length 2550;  
Best Local Similarity 75.0%; Pred. No. 1.2e+02;  
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 2 TGTAAATGGCAGTCT 17  
||| ||||| |||  
Db 1213 TTTTACATGGGAGTGT 1198

RESULT 65  
US-09-184-418C-51/c  
; Sequence 51, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice

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; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 51
; LENGTH: 2579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=tat
US-09-184-418C-51

Query Match      48.0%; Score 9.6; DB 1; Length 2579;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCT 17
Db      1592 TCTTACATGGGAGTGT 1577
      ||||| ||||| |||||

RESULT 66
US-09-184-418C-25/C
; Sequence 25, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 25
; LENGTH: 2597
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=tat
US-09-184-418C-25

Query Match      48.0%; Score 9.6; DB 1; Length 2597;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCT 17
Db      1607 TTTTACATGGGAGTGT 1592
      ||||| ||||| |||||

RESULT 67
US-09-184-418C-33/C
; Sequence 33, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 33
; LENGTH: 2606
; TYPE: DNA

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; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene=tat; CDS: join (5177..5391,
; OTHER INFORMATION: 7698..7782)
US-09-184-418C-33

Query Match      48.0%; Score 9.6; DB 1; Length 2606;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      4 TTAATGGCAGTCTAG 19
Db      1164 TTTAATAGCAGTTGAG 1149
      ||||| ||||| |||||

RESULT 68
US-09-184-418C-52/C
; Sequence 52, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 52
; LENGTH: 2645
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=rev
US-09-184-418C-52

Query Match      48.0%; Score 9.6; DB 1; Length 2645;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCT 17
Db      1453 TCTTACATGGGAGTGT 1438
      ||||| ||||| |||||

RESULT 69
US-09-184-418C-34/C
; Sequence 34, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 34
; LENGTH: 2657
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene=rev; CDS: join(5316..5391,
; OTHER INFORMATION: 7698..7972)
US-09-184-418C-34

Query Match      48.0%; Score 9.6; DB 1; Length 2657;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

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; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene=pol
US-09-184-418C-83

Query Match      48.0%; Score 9.6; DB 1; Length 3017;
Best Local Similarity 75.0%; Pred. No. 1.1e-02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
   ||| ||||| |||
Db 1238 TCATTGACAGTCCAGC 1223

RESULT 75
US-09-184-418C-48/c
; Sequence 48, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 48
; LENGTH: 4307
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=gag-pol fusion
US-09-184-418C-48

Query Match      48.0%; Score 9.6; DB 1; Length 4307;
Best Local Similarity 75.0%; Pred. No. 89;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
   ||| ||||| |||
Db 2527 TCATTGACAGTCCAGC 2512

RESULT 76
US-09-184-418C-5/c
; Sequence 6, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 6
; LENGTH: 8954
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; 142..1579:gene="gag"; 1437..4448:gene="pol";
; OTHER INFORMATION: 4393..4971:gene="vif"; 4911..5201:gene="vpr";
; OTHER INFORMATION: 5182..7782:gene="tat"; 5321..7972:gene="rev";
; OTHER INFORMATION: 5586..8114:gene="env"; 8116..8736:gene="nef"
US-09-184-418C-6

Query Match      48.0%; Score 9.6; DB 1; Length 8954;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
   ||| ||||| |||
Db 2527 TCATTGACAGTCCAGC 2512

RESULT 77
US-09-184-418C-11/c
; Sequence 11, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 11
; LENGTH: 8959
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; 138.1613:"gag";
; OTHER INFORMATION: 1418.4428:"pol"; 4361.4939:"vif"; 4879.5169:"vpr";
; OTHER INFORMATION: 5150.7782:"tat"; 5289.7939:"rev"; 5378.5638:"vpu";
; OTHER INFORMATION: 5556.8129:"env"; 8131.8754:"nef"
US-09-184-418C-11

Query Match      48.0%; Score 9.6; DB 1; Length 8959;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
   ||| ||||| |||
Db 2637 TCATTGACAGTCCAGC 2622

RESULT 78
US-09-184-418C-5/c
; Sequence 5, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 5
; LENGTH: 8966
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="92NG003"; 157..1650:gene="gag"; 4408..4986:gene="vif";
; OTHER INFORMATION: 4926..5039:gene="vpr"; 5184.7762:tat;
; OTHER INFORMATION: 5323..7967:gene="rev"; 5425..5654:gene="vpu";
; OTHER INFORMATION: 5572..8109:gene="env"; 8111..8731:gene="nef"
US-09-184-418C-5

Query Match      48.0%; Score 9.6; DB 1; Length 8966;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 2 TGTAAATGGCAGTCT 17
   ||| ||||| |||
Db 6775 TCTTACATGGGNGTGT 6760
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; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; CURRENT APPLICATION NUMBER: US/09/184,418C
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 4
; LENGTH: 8992
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR020; 133..1611:gag; 4369.4947:vif;
; OTHER INFORMATION: 4887.5177:vpr; 5158.7767:tat; 5297.7957:rev;
; OTHER INFORMATION: 5396.5641:vpu; 5559.8099:env; 8101.8727:nef
US-09-184-418C-1
;
Query Match 48.0%; Score 9.6; DB 1; Length 8968;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2644 TCATTGACAGTCCAGC 2629

RESULT 80
US-09-184-418C-9/c
; Sequence 9, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; CURRENT APPLICATION NUMBER: US/09/184,418C
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM751.3; 137.1632:gag; 1419.4435:pol;
; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5169.7814:tat;
; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpu; 5585.8128:env;
; OTHER INFORMATION: 8130.8753:nef
US-09-184-418C-9
;
Query Match 48.0%; Score 9.6; DB 1; Length 8972;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2656 TCATTGACAGTCCAGC 2641

RESULT 81
US-09-184-418C-4/c
; Sequence 4, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; CURRENT APPLICATION NUMBER: US/09/184,418C
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 10
; LENGTH: 9060
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; 159.1649:gag;
; OTHER INFORMATION: 1442.4453:pol; 4398.4976:vif; 4916.5206:vpz;
; OTHER INFORMATION: 5187.7841:tat; 5326.8046:rev;
; OTHER INFORMATION: 5428.5673:vpu; 5591.8188:env; 8190.8843:nef
US-09-184-418C-10
;
Query Match 48.0%; Score 9.6; DB 1; Length 9060;
Best Local Similarity 75.0%; Pred. No. 51;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2673 TCATTGACAGTCCAGC 2658

RESULT 83
US-09-184-418C-108/c
; Sequence 108, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; CURRENT APPLICATION NUMBER: US/09/184,418C
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 10
; LENGTH: 9060
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; 139.1624:gag; 1690.4428:pol(N-terminus uncer
; OTHER INFORMATION: 4373.4951:vif; 4891.5181:vpz; 5162.7801:tat; 5301.7958:rev;
; OTHER INFORMATION: 5403.5648:vpu; 5566.8148:env; 8150.8773:nef
US-09-184-418C-4
;
Query Match 48.0%; Score 9.6; DB 1; Length 8992;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2648 TCATTGACAGTCCAGC 2633

RESULT 82
US-09-184-418C-10/c
; Sequence 10, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; CURRENT APPLICATION NUMBER: US/09/184,418C
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 10
; LENGTH: 9060
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; 159.1649:gag;
; OTHER INFORMATION: 1442.4453:pol; 4398.4976:vif; 4916.5206:vpz;
; OTHER INFORMATION: 5187.7841:tat; 5326.8046:rev;
; OTHER INFORMATION: 5428.5673:vpu; 5591.8188:env; 8190.8843:nef
US-09-184-418C-10
;
Query Match 48.0%; Score 9.6; DB 1; Length 9060;
Best Local Similarity 75.0%; Pred. No. 51;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2673 TCATTGACAGTCCAGC 2658

RESULT 83
US-09-184-418C-108/c
; Sequence 108, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; CURRENT APPLICATION NUMBER: US/09/184,418C
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 10
; LENGTH: 9060
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM751.3; 137.1632:gag; 1419.4435:pol;
; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5169.7814:tat;
; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpu; 5585.8128:env;
; OTHER INFORMATION: 8130.8753:nef
US-09-184-418C-9
;
Query Match 48.0%; Score 9.6; DB 1; Length 8972;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2656 TCATTGACAGTCCAGC 2641

RESULT 81
US-09-184-418C-4/c
; Sequence 4, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; CURRENT APPLICATION NUMBER: US/09/184,418C
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR020; 133..1611:gag; 4369.4947:vif;
; OTHER INFORMATION: 4887.5177:vpr; 5158.7767:tat; 5297.7957:rev;
; OTHER INFORMATION: 5396.5641:vpu; 5559.8099:env; 8101.8727:nef
US-09-184-418C-1
;
Query Match 48.0%; Score 9.6; DB 1; Length 8968;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2644 TCATTGACAGTCCAGC 2629
```



US-09-184-418C-21/c  
; Sequence 21, Application US/09184418C  
; Patent No. 6492110  
; GENERAL INFORMATION:  
; APPLICANT: Hahn, Beatrice  
; APPLICANT: Gao, Feng  
; APPLICANT: Shaw, George  
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
; FILE REFERENCE: D6287  
; CURRENT APPLICATION NUMBER: US/09/184,418C  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 21  
; LENGTH: 207  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate=92NG083; gene=gag  
US-09-184-418C-21  
Query Match 45.0%; Score 9; DB 1; Length 207;  
Best Local Similarity 70.6%; Pred. No. 3.1e+02;  
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;  
y 1 CTGTTAAATGGCAGTCT 17  
b 143 CGGTTAAGTCGCAATCT 127  
RESULT 89  
US-09-184-418C-40  
Sequence 40, Application US/09184418C  
Patent No. 6492110  
GENERAL INFORMATION:  
APPLICANT: Hahn, Beatrice  
APPLICANT: Gao, Feng  
APPLICANT: Shaw, George  
TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
FILE REFERENCE: D6287  
CURRENT APPLICATION NUMBER: US/09/184,418C  
CURRENT FILING DATE: 1999-11-02  
NUMBER OF SEQ ID NOS: 112  
SEQ ID NO 40  
LENGTH: 291  
TYPE: DNA  
ORGANISM: Human immunodeficiency virus type 1  
FEATURE:  
OTHER INFORMATION: isolate=92RW009; gene=vpr  
US-09-184-418C-40  
Query Match 45.0%; Score 9; DB 1; Length 291;  
Best Local Similarity 70.6%; Pred. No. 2.9e+02;  
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;  
y 4 TTAATGGCAGTCTAGC 20  
b 66 TTTAGAGGCACTCAAGC 82  
RESULT 90  
US-09-184-418C-63  
Sequence 63, Application US/09184418C  
Patent No. 6492110  
GENERAL INFORMATION:  
APPLICANT: Hahn, Beatrice  
APPLICANT: Gao, Feng  
APPLICANT: Shaw, George  
TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
FILE REFERENCE: D6287  
CURRENT APPLICATION NUMBER: US/09/184,418C

US-09-184-418C-63  
; CURRENT FILING DATE: 1999-11-02  
; NUMBER OF SEQ ID NOS: 112  
; SEQ ID NO 63  
; LENGTH: 621  
; TYPE: DNA  
; ORGANISM: Human immunodeficiency virus type 1  
; FEATURE:  
; OTHER INFORMATION: isolate=93BR029; gene=nef  
US-09-184-418C-63  
Query Match 45.0%; Score 9; DB 1; Length 621;  
Best Local Similarity 70.6%; Pred. No. 2.5e+02;  
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;  
y 3 GTTAAATGGCAGTCTAG 19  
b 15 GTCAAAAAGTAGTATAG 31  
RESULT 91  
US-09-184-418C-32  
Sequence 32, Application US/09184418C  
Patent No. 6492110  
GENERAL INFORMATION:  
APPLICANT: Hahn, Beatrice  
APPLICANT: Gao, Feng  
APPLICANT: Shaw, George  
TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
FILE REFERENCE: D6287  
CURRENT APPLICATION NUMBER: US/09/184,418C  
CURRENT FILING DATE: 1999-11-02  
NUMBER OF SEQ ID NOS: 112  
SEQ ID NO 32  
LENGTH: 624  
TYPE: DNA  
ORGANISM: Human immunodeficiency virus type 1  
FEATURE:  
OTHER INFORMATION: isolate=92NG083; gene=nef  
US-09-184-418C-32  
Query Match 45.0%; Score 9; DB 1; Length 624;  
Best Local Similarity 70.6%; Pred. No. 2.5e+02;  
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;  
y 4 TTAATGGCAGTCTAGC 20  
b 556 TTTACAGTAGCCTAGC 572  
RESULT 92  
US-09-184-418C-45  
Sequence 45, Application US/09184418C  
Patent No. 6492110  
GENERAL INFORMATION:  
APPLICANT: Hahn, Beatrice  
APPLICANT: Gao, Feng  
APPLICANT: Shaw, George  
TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
FILE REFERENCE: D6287  
CURRENT APPLICATION NUMBER: US/09/184,418C  
CURRENT FILING DATE: 1999-11-02  
NUMBER OF SEQ ID NOS: 112  
SEQ ID NO 45  
LENGTH: 624  
TYPE: DNA  
ORGANISM: Human immunodeficiency virus type 1  
FEATURE:  
OTHER INFORMATION: isolate=92RW009; gene=nef  
US-09-184-418C-45  
Query Match 45.0%; Score 9; DB 1; Length 624;

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Best Local Similarity 70.6%; Pred. No. 2.5e+02;
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 3 GTTAAATGCGAGTCTAG 19
Db 15 GTCAAAATGATGTCAG 31

RESULT 93
US-09-184-418C-100
; Sequence 100, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 100
; LENGTH: 1476
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate-94IN476.104; gene=gag
US-09-184-418C-100

Query Match 45.0%; Score 9; DB 1; Length 1476;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 TGTAAATG 10
Db 1152 TGTAAATG 1160

RESULT 94
US-09-184-418C-12
; Sequence 12, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 12
; LENGTH: 1479
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate-93BR020; gene=gag
US-09-184-418C-12

Query Match 45.0%; Score 9; DB 1; Length 1479;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 TGTAAATG 10
Db 1152 TGTAAATG 1160

RESULT 95
US-09-184-418C-82
; Sequence 82, Application US/09184418C
```

```
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 82
; LENGTH: 1496
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate-96ZM751.3; gene=gag
US-09-184-418C-82

Query Match 45.0%; Score 9; DB 1; Length 1496;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 TGTAAATG 10
Db 1154 TGTAAATG 1162

RESULT 96
US-09-184-418C-29
; Sequence 29, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 29
; LENGTH: 1503
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate-90CR056; gene=gag; CDS:
; OTHER INFORMATION: Join(137..1434,1434..4443)
US-09-184-418C-29

Query Match 45.0%; Score 9; DB 1; Length 1503;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 TGTAAATG 10
Db 1170 TGTAAATG 1178

RESULT 97
US-09-184-418C-89/c
; Sequence 89, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
```



```
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 96
; LENGTH: 2721
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene=rev
US-09-184-418C-96

Query Match          45.0%; Score 9; DB 1; Length 2721;
Best Local Similarity 70.6%; Pred. No. 1.4e+02;
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCTA 18
        ||| || || || || ||
Db      1305 TGTAAAGTGTCTATCCA 1289

RESULT 103
US-09-184-418C-23/c
; Sequence 23, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 23
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=vif
US-09-184-418C-23

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
        || || || || || ||
Db      242 AAATGGCAGTCT 231

RESULT 104
US-09-184-418C-39/c
; Sequence 39, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 39
```

```
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; gene=vif
US-09-184-418C-39

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
        ||| || || || ||
Db      242 AAATGCCAATCT 231

RESULT 105
US-09-184-418C-49/c
; Sequence 49, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 49
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=vif
US-09-184-418C-49

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
        ||| || || || || ||
Db      242 AAGTCCAGTCT 231

RESULT 106
US-09-184-418C-75
; Sequence 75, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 75
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM651.8; gene=vif
US-09-184-418C-75

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
```



```
QY 9 TGGCAGCTCTAGC 20
    ||||| |||
Db 305 TGGCAGACCAGC 316

RESULT 107
US-09-184-418C-75/c
; Sequence 75, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 75
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M651.8; gene=vif
US-09-184-418C-75

Query Match 44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 6 AAATGGCAGTCT 17
    ||||| |||
Db 242 AAATGCCAATCT 231

RESULT 108
US-09-184-418C-84
; Sequence 84, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 84
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; gene=vif
US-09-184-418C-84

Query Match 44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 9 TGGCAGCTCTAGC 20
    ||||| |||
Db 305 TGGCAGACCAGC 316

RESULT 109
US-09-184-418C-84/c
; Sequence 84, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 84
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; gene=vif
US-09-184-418C-84

Query Match 44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 9 TGGCAGCTCTAGC 20
    ||||| |||
Db 305 TGGCAGACCAGC 316

RESULT 110
US-09-184-418C-93/c
; Sequence 93, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 93
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene=vif
US-09-184-418C-93

Query Match 44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 6 AAATGGCAGTCT 17
    ||||| |||
Db 242 AAATGCCAATCT 231

RESULT 111
US-09-184-418C-102
; Sequence 102, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 102
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; gene=vif
US-09-184-418C-102

Query Match 44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 6 AAATGGCAGTCT 17
    ||||| |||
Db 242 AAATGCCAATCT 231

RESULT 112
US-09-184-418C-102
; Sequence 102, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 102
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; gene=vif
US-09-184-418C-102

Query Match 44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 6 AAATGGCAGTCT 17
    ||||| |||
Db 242 AAATGCCAATCT 231
```

```
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=vif
US-09-184-418C-102

Query Match      44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      9 TGCAGCTCTAGC 20
        ||||| |||
Db      305 TGCAGACCAGC 316

RESULT 112
US-09-184-418C-102/c
; Sequence 102, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 102
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=vif
US-09-184-418C-102

Query Match      44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      6 AAATGGCAGCTCT 17
        ||||| |||
Db      242 AAATGCCAATCT 231
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Search completed: September 11, 2003, 15:02:08  
Job time : 5 secs